

China's Energy Security: The Grand "Hedging" Strategy

**A Monograph
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Abstract

CHINA'S ENERGY SECURITY: THE GRAND "HEDGING" STRATEGY by MAJ Stacey L. Lee, U.S. Army, 50 pages.

In the late 1970s, a group of reform minded Chinese, led by Deng Xiaoping, enacted a series of economic reforms that catapulted China into the global spotlight. The key to sustaining the dynamic growth is access to petroleum resources. The central question of this monograph is whether China's strategy is liberal-institutionalist or realist-mercantilist. Using a qualitative case study methodology that explores the dependent variable, energy security, using three independent variables, cost, reliability, and security, China's grand strategy is shown to be a hedging approach.

The analysis consists of three case studies. The first case study shows that as the Chinese National Oil Companies grow in scale and experience, they are increasingly at odds with the central government's strategy. This conflict works at cross-purposes to the overall state-directed strategy. The second case study shows that in countries like Sudan, where China has extensive unilateral agreements, the strategy is clearly realist-mercantilist. The final case study shows that in areas like the maritime transit corridors, where China is reliant on outside actors for security, the strategy is liberal-institutionalism or free riding.

Taken as a whole, the Chinese strategy for energy security is a combination of liberal-institutionalism, realist-mercantilism, and "free riding," tailored to fit the situation and to maximize opportunities that present themselves.

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ACRONYMS

CNOOC – China National Offshore Oil Corporation

CNPC – China National Petroleum Corporation

CPA – Comprehensive Peace Agreement

E&P – Exploration & Production

IEA – International Energy Agency

MOC – Multinational Oil Company

NOC – National Oil Company

PLA – People’s Liberation Army

PLAN – People’s Liberation Army Navy

PRC – People’s Republic of China

PSC – Production Sharing Contracts

Sinopec – China Petroleum and Chemical Corporation

SLOC – Sea Lines / Lanes of Communication

UN – United Nations

UNSC – United Nations Security Council

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Introduction

“The rise of China will undoubtedly be one of the great dramas of the twenty-first century. China’s extraordinary growth and active diplomacy are already transforming East Asia, and future decades will see even greater increases in Chinese power and influence.”¹ The question is whether the “great drama” will be a powerful aggressive China seeking to dominate the Asia Pacific region or an influential China seeking to transform international institutions to fit its strategy. The answer to both is yes. China has shown itself to be adept at assessing whether the right strategy involves unilateral action or is best-accomplished using multilateral action within the current, western-dominated system. The implication for policy makers in the U.S. is that the current lethargic policy making apparatus will have to become increasingly adaptive to counter the hedging strategy in use by China.

In the late 1970’s a group of “reformers,” with Deng Xiaoping at the helm, initiated economic reforms that supercharged the Chinese economy.² Today China continues the rapid transformation and is one of the fastest developing countries, both in the East Asian region and globally. However, this rapid growth makes China reliant on external actors to meet demand for critical resources. Chief among the resources and the driver of China’s dynamic growth is access to hydrocarbons, particularly oil. Beginning in 1993, demand outstripped domestic supply as China transformed from a net oil exporter to a net oil importer.³ Projections are, as Figure 1 shows, the gap will continue to widen through 2020 and beyond. From the Chinese perspective,

¹G. John Ikenberry, “The Rise of China and the Future of the West: Can the Liberal System Survive?” *Foreign Affairs* 87, no. 1, (January/February 2008). Available online at <http://www.ciaonet.org.lumen.cgsccarl.com/journals/fa/v87i1/index.htm> (accessed November 19, 2009).

²Michael G. Gallagher, “China’s Illusory Threat to the South China Sea,” *International Security* 19, no. 1, (Summer 1994): 190.

³Haider A. Khan, “China’s Development Strategy and Energy Security: Growth, Distribution and Regional Cooperation,” (Research Paper no. 2008/56, United Nations University, Helsinki, Finland, 2008), 3.

“energy is a key strategic issue for China’s economic development, social stability, and national security. As such, China sees energy shortages as one of the biggest potential threats.”⁴

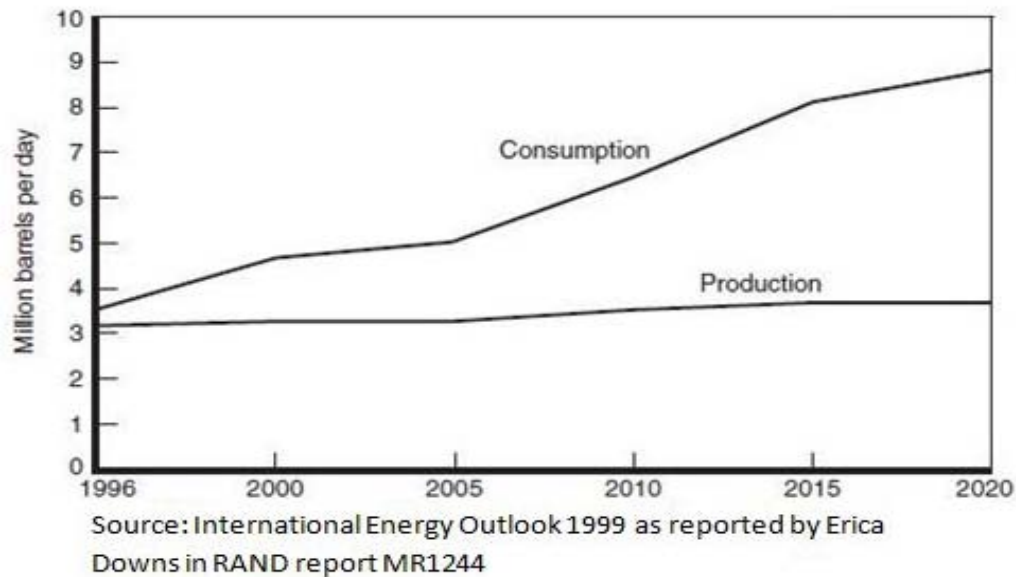


Figure 1. China's Oil Production versus Consumption Trends, 1996-2020

Will China, in the future, act within the confines of the liberal-institutionalist system or, take an increasingly realist-mercantilist approach to energy security. All energy import dependent states seek to increase their relative and absolute power and influence in the global marketplace. China is no different in this respect. Given the Chinese viewpoint, the question is whether Beijing’s strategy is one that seeks to work within the current system as a multilateral actor, what Robert Zoellick called a “responsible stakeholder,”⁵ or increasingly outside the system unilaterally.

⁴Xencheng Liu, “China’s Energy Security and Its Grand Strategy,” (Policy Analysis Brief, The Stanley Foundation, Muscatine, IA, September 2006), 4.

⁵Robert B. Zoellick, “Wither China: From Membership to Responsibility?” (Remarks to the National Committee on U.S.-China Relations, New York, NY, September 21, 2005).

The five sections of this monograph explore the question from the standpoint of China's energy security strategy. This monograph finds that the Chinese energy security strategy is a hedging approach, balancing unilateral and multilateral action to achieve diverse and reliable access to resources at a cost Beijing deems affordable. The first section explains the theory and hypothesis, examines relevant international relations and political economics theories, defines energy security and the key strategies and options, and gives a brief overview of the current oil market structure and associated risks. The second section discusses methodology and the variables for analyzing the case studies. In the third section, a case study assesses the interactions of the Chinese National Oil Companies (NOC) with the central government. The fourth section is a case study that explores the Chinese strategy at point of origin for petroleum resources. The case study in the fifth section assesses the strategy for energy transit security. The sixth and concluding section, summarizes the case studies and China's energy security strategy, and offers observations on the implications of the strategy.

Theory and Hypothesis

The central question of this monograph is whether China, over the long-term, will continue to liberalize and decentralize, or pursue a strategy designed to "secure our position; cope with affairs calmly; hide our capacities and bide our time," as stated in Deng Xiaoping's "24 Character Strategy," until China can assert its power on the global stage.⁶ The reforms enacted by Deng Xiaoping in the late 1970s "pushed decentralization, liberalization, and global economic integration, though China did not decentralize, liberalize, or integrate fully or rapidly across all sectors."⁷ In actuality, the Chinese energy security strategy is a hedging approach that maximizes both unilateral and multilateral opportunities equally. To explore the question we first define

⁶U.S. Department of Defense, *Annual Report to Congress: Military Power of the People's Republic of China 2008*, Office of the Secretary of Defense, (Washington, D.C., 2008), 8.

⁷Jean-Marc F. Blanchard, "Harmonious World and China's Foreign Economic Policy: Features, Implications, and Challenges," *Journal of Chinese Political Science* 13, no. 2, (2008), 167.

relevant theories and energy security and then describe energy security strategies and options. We then briefly discuss the current oil market structure and associated risks before moving to the methodology and introduction of the case studies.

International Relations and Political Economics Theories

China's energy security strategy is a mixture of government and industry action. The study of the strategy uses a mix of international relations (IR) theories to analyze the actions of the central government and international political economics (IPE) theories to analyze the actions of the NOCs. Harvard University professor Stephen Walt, writing in *Foreign Policy*, highlights two international relations theories, liberalism and realism, that are relevant to the central government's efforts and describe the general policies that each exhibits.⁸ The traditional IPE theories institutionalism and mercantilism, take the IR theories a step further, specifically tying them to economic actors within states. Analysis of the actions of the NOCs uses the IPE theories. In combination, the two categories are liberal-institutionalism and realist-mercantilism.

According to the analysis of one think tank, China is "diverse and contradictory, like a black box where both optimists and pessimists can find proof to support their expectations."⁹ The "diverse and contradictory" nature makes describing the strategy as either black or white difficult. One of the primary reasons for this difficulty is the "phenomenon called free riding," which is a "situation in which an individual relies on others to bear the costs of a program from which the individual derives benefits."¹⁰ An example of free riding is China's reliance on international naval forces to combat pirates along the sea lines of communication (SLOC) in the Gulf of Aden

⁸Stephen M. Walt, "International Relations: One World, Many Theories," *Foreign Policy* 110 (Spring 1998): 38.

⁹Edward Tse and Ronald Haddock, "Developing a China Strategy that Delivers Results," (McLean, VA: Booz Allen Hamilton, 2005). Available online at <http://www.boozallen.com/media/file/145793.pdf> (accessed November 17, 2009).

¹⁰Thomas Oatley, *International Political Economy: Interests and Institutions in the Global Economy*, 2nd ed. (New York: Pearson Education, Inc, 2006), 77.

and into the Indian Ocean Commons (IOC). The U.S. Navy currently provides the majority of forces that secure the various maritime transit corridors. From a Chinese perspective, free riding occurs for two reasons. First, the Chinese government is unable to adopt a unilateral approach, as is the case with anti-piracy efforts. Second, the Chinese perceive the costs associated with participation are not commensurate to the benefits, or the risks involved. Free riding can occur in both a liberal or realist approach, which complicates the analysis of China's strategy.

Liberal-Institutionalism

The liberal approach is founded on the assertion that “concern for power will be overridden by economic/political considerations” and the primary instruments of a liberal state are “international institutions, economic exchange, promotion of democracy, etc.”¹¹ A contemporary liberal state would exhibit “increased cooperation as liberal values, free markets, and international institutions spread.”¹² From an IPE perspective, for a liberal actor, “the world economy has the potential to be a seamless global market place in which free trade and the free movement of capital shape the policies of governments and economic actors. Order would be achieved by the ‘invisible hand’ of competition in the global marketplace.”¹³ Under an institutionalist strategy, the Chinese government and the NOCs would actively seek cooperation with regional partners, fully and actively support international institutions, and seek cooperative alliances that support the free market.

Liberalists refute the realist assertion that as states grow in power the inevitable end is conflict and destabilizing competition. Integration into global organizations, according to Walt, will “overcome selfish state behavior, mainly by encouraging states to forego immediate gains for

¹¹Walt, 38.

¹²Ibid., 38.

¹³Oatley, 9.

the greater benefits of enduring cooperation.”¹⁴ Liberalists believe the “desire for prosperity, commitment to liberal values” will overcome the self-interest of states.¹⁵ A liberal-institutionalist energy security strategy incorporates rhetoric that fully supports the current system and open cooperation with international organizations, while favoring multilateral relations with energy suppliers and policy that supports international norms. Under a liberal strategy, China would limit relations with countries like Sudan in support of UN sanctions and use its advantage with the government in Khartoum to address issues like the conflict in Darfur.

National Bureau of Asian Research (NBR) scholars Kenneth Lieberthal and Mikkal Herberg are representative of the liberal-institutionalists. They posit that “due to the belief that its energy security is too important to leave to global markets,” the current western-dominated system is driving China away from liberalism and “its adoption of a ‘Go-Out’ strategy to meet demand,” is representative of this.¹⁶ Three aspects of their research stand out. First, “this mercantilist attitude is strongly influenced by a general mistrust of global energy markets.”¹⁷ Second, “distrust of energy markets is aggravated by the perception that these markets are dominated by the United States, a perception that overlaps with concerns that the United States is out to exploit China’s energy weakness.”¹⁸ Third, “in terms of energy sector capabilities, Beijing feels that China is working from a position of weakness and must play ‘catch-up’.” In general, the NOCs and the central government are concerned with “equity oil” and oil for use in domestic markets.¹⁹ The NOCs prefer equity oil because it represents the currency of exchange on the

¹⁴Walt, 32.

¹⁵Ibid., 38.

¹⁶Kenneth Lieberthal and Mikkal Herberg, “China’s Search for Energy Security: Implications for U.S. Policy,” *NBR Analysis* 17, no. 1 (Washington, D.C.: The National Bureau of Asian Research, 2006), 11.

¹⁷Ibid., 18.

¹⁸Ibid., 18.

¹⁹For the purposes of this monograph, equity oil earmarked for domestic consumption are

global oil markets.²⁰ The NOCs are similar to the multinational oil companies (MOC) in this case because “oil exploration and the development costs in China are high, available resources are limited, and large, low-cost reserve opportunities are concentrated abroad.”²¹ Equity oil is a principle method for mitigating risk.

It is also rational for states pursuing a liberal approach to engage in free riding. However, they often participate in multinational operations from a desire, at least symbolically, to support the current system. An example of this is the three People’s Liberation Army Navy (PLAN) ships currently committed to anti-piracy efforts in the Gulf of Aden. The ships are supporting the continuation of the security guaranteed by the U.S. Navy, but have not integrated into the international framework.

Realist-Mercantilism

The theory of realism is concerned with power. The theory asserts that, “[s]elf-interested states compete constantly for power or security” using both economic and military means to achieve the ends.²² Walt’s prediction for a realist nation-state is the “resurgence of overt great power competition.”²³ The closely related Mercantilist Theory, assumes “that the world-economy is an arena of competition among states seeking to maximize relative strength and power” and the “aim of every state must be to maximize its wealth and independence.”²⁴ Under a mercantilist strategy, the government and the NOCs would use protective strategies and subsidies

considered under the category of oil for domestic consumption and not part of the equity stakes earmarked for trade on the open market.

²⁰Ibid., 18.

²¹Ibid.

²²Walt, 38.

²³Ibid.

²⁴John Baylis, Steve Smith, and Patricia Owens, eds., *The Globalization of World Politics: An Introduction to International Relations*, 4th ed. (New York: Oxford University Press, 2008), 249.

to ensure self-sufficiency rather than supporting free markets. For mercantilists the self-interest of states drives the quest for power on all levels from economic to military, and they are “generally pessimistic about the prospects for eliminating conflict and war.”²⁵ Characteristics of a realist strategy are rhetoric that fully supports the current system, while feigning cooperation with international organizations. A realist approach also favors bilateral relations with diverse suppliers, while increasing the reach and capability to compete economically and militarily.

Columbia University professor Jack Snyder is representative of the realist-mercantilist viewpoint. He posits that China’s current foreign policy is “grounded in realist ideas,” and it will avoid conflict while “developing its military slowly but surely as its economic power grows.”²⁶ According to this viewpoint, China is not cooperating from a desire to integrate fully into the current system but rather from the lack of power to compete outside the current system. From an energy security standpoint, China will continue to “free ride” on the Western-dominated system until its NOCs have the experience, economic power and military backing “to expand its sphere of domination,”²⁷ in a mercantilist way.

Snyder calls the theories “a filter for looking at a complicated picture,” and when they enter the realm of policymaking, “they can sometimes become intellectual window dressing.”²⁸ A recent example of the potential fallout from blurring the distinctions between the theories was the failed bid by the China National Offshore Oil Corporation (CNOOC) to acquire Unocal, a U.S. oil company. From the Chinese view, “Congressional furor over the CNOOC-Unocal bid and U.S. opposition to its involvement in problem states confirm the view of many in Beijing that

²⁵Walt, 31.

²⁶Jack Snyder, “One World, Rival Theories,” *Foreign Policy* 145 (November/December 2004), 55.

²⁷*Ibid.*, 54-55.

²⁸*Ibid.*, 55.

the United States is intent on blocking China's efforts to secure future energy supplies."²⁹ The realists believe "the major geopolitical risks to stable oil flows--such as political instability in key exporting countries, wars, ethnic conflict, a potential U.S. blockade of China's oil in a Taiwan crisis, or transit bottlenecks--would disrupt equity and contract oil flows equally."³⁰ Many in the Chinese government see the episode and the myriad geopolitical risks as proof of the need to diversify source of supply and method of delivery in order to ensure energy security.

Free riding under a realist approach, China would delay even symbolic participation with the established international order. An example of this is the fact that even though China became a net importer of oil in 1993 and the bulk of the imports flow along Pacific Ocean SLOCs, China delayed participation in multilateral anti-piracy operations until 2008.

Defining Energy Security

Various international agencies define energy security differently. The UN defines energy security as "a situation where energy supplies are available at all times in various forms, in sufficient quantities, and at affordable prices."³¹ Similarly, Stanley Foundation scholar Xencheng Liu defines energy security as "security of supply--sustainability of access to global energy resources--and security of demand--efficiency of energy consumption and environmental protection."³² The common features of the various definitions that focus on external energy security are diversity of supply, reliability of supply to mitigate a single point of failure, and adequacy of supply to meet demand at an "affordable" cost. A discussion of the strategies to achieve security and the general options available follows.

²⁹Lieberthal and Herberg, 27.

³⁰Ibid.

³¹Shaofeng Chen, "Motivations behind China's Foreign Oil Quest: A Perspective from the Chinese Government and the Oil Companies," *Journal of Chinese Political Science* 3, no. 1 (2008): 2.

³²Liu, 2.

Basic Strategies for Achieving Energy Security

The International Energy Agency (IEA) lists five “basic strategies” as essential for “import-dependent” countries to ensure energy security. The five strategies are “developing domestic resources to the maximum possible, creating strategic reserves, seeking foreign technology and investment, establishing reliable and secure oil trading channels, and making strategic investments in upstream production facilities abroad.”³³ Historically, all nations in transition from energy import-independence to import-dependence have followed these five strategies. The Chinese government is following these strategies and thus sees itself as following the same path as other nations. Three of the five strategies are relevant to this monograph. Seeking foreign technology and investment, is relevant to the internal interactions between the central government and the NOCs. Establishing reliable and secure oil trading channels, and making strategic investments in upstream production facilities, are relevant to the external analysis. A brief description of each follows.

Foreign Technology and Investment

Given the rapid growth of China’s oil demand and the relative inexperience of the NOCs, production-sharing contracts (PSC) are a method the Chinese government uses to obtain technology and investment. Offshore, MOCs “have been granted much more access...mainly through PSCs.”³⁴ For the MOCs, they “leverage their technical expertise in order to partner with a Chinese NOC and make a foray into the Chinese markets.”³⁵ PSCs also allow China to tap into

³³International Energy Agency, *China’s Worldwide Quest for Energy Security* (Paris, 2005), 74; Upstream production facilities refers production and refinement infrastructure that transforms raw crude oil into usable barrels of oil at or near the point of origin or at an intermediate location that precludes the shipment of crude products to domestic refinement facilities.

³⁴Energy Information Administration, “Country Analysis Briefs: China,” (Last updated July 2009). Available online at <http://www.eia.doe.gov/emeu/cabs/China/Background.html> (accessed November 19, 2009).

³⁵Ibid.

expertise to exploit further aging domestic oil fields to offset declines in production. “China’s NOCs are investing significantly in technologies to increase oil recovery rates at the country’s mature oil fields.”³⁶ An example is the PSC signed in 2007 by CNPC “with foreign firms to co-develop the Liangjing and Jilin blocks in the sizeable Songliao basin.”³⁷

Reliable and Secure Oil Trading Channels

Reliability is a measure of both the stability at source and security along key transit routes. Diversity of supply mitigates collapse due to a single point of failure in the trading channel. “China has aggressive trade and investment strategies to position China for energy security in a longer-term scenario in which much energy is imported. Official rhetoric manages both to stress energy independence and to leave ample room for substantial imports...China has moved quickly to forge a credible set of linkages with international energy markets.”³⁸ Overall, the Chinese government and the NOCs are working both within the current system and outside of the current system, forging new relations to ensure reliability and security in the oil trading channels.

Strategic Investment in Upstream Production Facilities

China’s strategy also includes investment in upstream facilities, which offers several benefits. First, upstream infrastructure improvements strengthen the relations between Chinese companies and trading partners. Second, it allows Chinese NOCs to consolidate smaller refineries and modernize infrastructure, increasing production efficiency. Third, it eliminates the need to transport raw resources to mainland China for refining, which is particularly important to the cost per barrel of oil sold on the open market. Fourth, it offers a means for Chinese

³⁶Ibid.

³⁷Ibid.

³⁸International Energy Agency, “China’s Worldwide Quest for Energy Security,” 8.

companies to gain experience and increase scale of operations. Under these strategies, China has several options to achieve energy security.

China's Energy Security Strategy Options

Based on the strategies laid out above, China has “three options...to secure oil and gas, namely, by trade, by oil diplomacy, and by force.”³⁹ The first option, by trade, is working within the current market to secure oil reserves to meet growing demand. Beijing sees this option as risky because it makes China reliant on outside entities and vulnerable to disruption from shifts in the economic markets, instability in a few key export countries, and high risk at strategic choke points. The second option, by oil diplomacy, is the diversification of sources of import and varying final delivery routes. The second option has been the most successful for the Chinese NOCs in acquiring new exploration and production (E&P) rights and sources of supply.⁴⁰ The weakness in this option is that the primary sources of new supply tend to be ‘problem’ countries and regions, making expansion risky. However, as Liu notes, by increasing relations with ‘problem’ nations and helping them build their internal energy infrastructure, China establishes relationships that support national energy security policy.⁴¹

The third option, by force, is the most problematic and is not feasible over the short to mid-term. Some experts argue that the U.S. success during Operations DESERT SHIELD and DESERT STORM was proof to the central government leadership that major world powers were willing to resort to force to secure resources in key producing areas.⁴² They argue that this willingness to use force is pushing China to work with ‘problem’ states in order to diversify its

³⁹Chen, “Motivations behind China’s Foreign Oil Quest,” 79.

⁴⁰Exploration and Production (E&P) are inclusive of all facets of the search for new sources of supply, the infrastructure costs associated with extracting and refining, and the experience requirements for the associated tasks.

⁴¹Liu, 9.

⁴²Chen, “Motivations behind China’s Foreign Oil Quest,” 88.

energy sources and flow. In the long-term, many within the Chinese government believe this strategy highlights the importance of the People's Liberation Army (PLA) forces having the capability to secure both source and in transit routes.⁴³

Current Oil Market Structure

An exhaustive exploration of current oil market framework is beyond the scope of this monograph; however, a brief description the current global market is important to understanding China's energy strategy. According to Lieberthal and Herberg, "China's energy strategy currently appears rooted in a statist, mercantilist mentality among political leaders in Beijing...Beijing is acting according to the principle that energy security is too important to be left to the markets. China has thus decided to adopt the go-out strategy."⁴⁴ As Table 1 shows, the Energy Information Agency (EIA) estimates that roughly 30 percent of proven oil reserves⁴⁵ are currently productive. The remaining estimated 70 percent are non-productive due to three general reasons. First, some reserves are too costly to refine using current technology or current technology is inefficient. Second, are the reserves located in "sheltered" areas such as national parks and reserves or in contested areas. Third, are the reserves located in countries under some form of international censure, such as the Sudanese oil fields.⁴⁶

⁴³Erica Downs, "The Chinese Energy Security Debate," *The China Quarterly* 177, (March 2004), 21.

⁴⁴Lieberthal and Herberg, 11.

⁴⁵Proven reserves are quantities of oil that are recoverable using current geological and engineering data and technology.

⁴⁶Energy Information Administration, "World Proved Reserves of Oil and Natural Gas, Most Recent Estimates," (Last posted March 3, 2009). Available online at <http://www.eia.doe.gov/emeu/international/reserves.html> (accessed November 19, 2009).

Table 1. General Categories of Proven Oil Reserves

Productive (30%)	Non-Productive (70%)		
Standard Producing Countries	Economically or Technologically Unviable	Located in Protected or Restricted Sites	Located in "Troubled" States or Areas
Source: Energy Information Agency, "World Proved Reserves of Oil and Natural Gas, Most Recent Estimates"			

The latter category is attractive to developing countries such as China, who are emerging players in the current global oil market, due to quantity, willingness of the governments in question to work with China's NOCs, and weak competition from the MOCs. Weak competition from market giants is important because the MOCs have considerably more experience in exploration and production than China's NOCs and they have established market share for the bulk of productive sources.⁴⁷ To some extent, the Chinese NOCs reflect what international political economists call an "infant-industry."⁴⁸ Infant-industries are inherently inefficient in the short-term but can be efficient in the long-term if they overcome lack of economies of scale and experience. Shortfalls in economy of scale typically occur when newly established industries produce enough supply to export goods but do so in markets already dominated by larger, more efficient companies.⁴⁹ In the case of the Chinese NOCs, bilateral agreements for energy resources with countries like Sudan allow them to refine and produce oil in importable quantities. However, their relatively small scale and the dominance by the MOCs, the Chinese government must step in and subsidize the production to make the NOCs competitive. Over the long-term, the NOCs will achieve economies of scale that allow them to compete with the MOCs and the government will reduce or eliminate its support.

⁴⁷Chen, "Motivations behind China's Foreign Oil Quest," 85.

⁴⁸Oatley, 93-94.

⁴⁹Ibid.

Economies of experience “arise when efficient production requires specific skills that can be acquired only through production in the industry.”⁵⁰ The factors that affect economies of experience, according to Oatley, are the experience of management, skill of workers, and access to equipment and materials. Largely, the Chinese NOCs gain economy of experience through physical E&P. China can overcome this to some extent by taking “an active part in energy cooperation with other countries based on mutual benefit.”⁵¹ Overcoming shortfalls in experience requires increasing economies of scale or acquiring well-established entities that possess the needed experience.

Assessing the Risks

According to a study published by the Pacific Northwest National Laboratory, “China sees Energy Security through a Lens of Global Risk.”⁵² The study lists the primary risks as the “feeling of ‘exposure’ in the global market,” “global energy geopolitics,” the “U.S. Navy’s domination of Sea Lines of Communication” and a “strong sense of exclusion from global energy management institutions like the International Energy Agency.”⁵³ Three variables, cost of supply, availability of supply, and security of supply explain these risks.

Cost of Supply

Cost refers to both the tangible, fiscal costs and the intangible costs. With economic growth, affordability of resources and internal stability inextricably linked, efforts to mitigate downturns in cost are telling indicators of China’s overall energy security strategy. However, affordability is also a factor in the overall non-monetary and fiscal strategy applied. “The

⁵⁰Ibid., 94.

⁵¹Liu, 5.

⁵²Carol Kessler and Sean Kreyling, *Energy Security: The United States and China*, (Richland, Washington, U.S. Department of Energy, Pacific Northwest National Laboratory: March 2009), 21.

⁵³Ibid., 21.

affordability of oil becomes a security challenge because it could undermine the country's sustained rapid growth, which is vital for stability of the Chinese system – stability in economic, social, and even political terms.”⁵⁴ From a cost per barrel standpoint, Liao Hong and Chen Yun, writing in *People Daily Online*, estimate that for “every increase of 10 dollars per barrel of oil, China's economic growth will slow down by one percentage point.”⁵⁵ For example, China faced a cost-benefit decision on whether to expend diplomatic capital to block sanctions against Sudan over the crisis in Darfur or to soften its stance and work with the international community, prior to the 2008 Olympics in Beijing. Ultimately, China chose the more liberal approach and pressured Sudan to allow additional peacekeeper access.

Reliability of Supply

As internal oil reserves continue to shrink in relation to demand, China will seek ways to diversify external sources of supply. Diversity across myriad oil exporting countries is the natural hedge against a single source of failure. “Although there is enough oil abroad to satisfy its oil demand, China's imports are heavily focused on only a few countries which happen to sit in an area prone to instability and volatility.”⁵⁶ As the second case study explores, instability in key suppliers like Sudan limits the availability of access to energy resources. The result is that a small shock to the system could have a disproportionately large effect on availability.⁵⁷ China's strategy to ensure availability of supply is a significant factor in whether it pursues a liberal or mercantilist approach.

⁵⁴Bo Kong, *An Anatomy of China's Energy Insecurities and Strategies*, (Richland, Washington, U.S. Department of Energy, Pacific Northwest National Laboratory: March 2009), 19.

⁵⁵*Ibid.*, 19.

⁵⁶*Ibid.*, 13.

⁵⁷*Ibid.*, 13.

Security of Supply

Two issues arise when discussing China's oil supply security. Diversification of supply in regions prone to instability and conflict, like Sudan, come at the cost of increased risk. In Sudan China uses liberal and mercantilist strategies to mitigate the overall risk. For example, in the United Nations, China has used its relationship with the Sudanese government to expand multilateral peacekeeping efforts in Darfur, as well as to maintain access to outside aid agencies. While these actions clearly reflect a liberal approach, China has simultaneously strengthened bilateral relations to the exclusion of the MOCs, rebuilt ailing infrastructure and sent security forces into Sudan to ensure the safety of sources of supply. The second risk to reliability occurs along the various transport routes and the SLOCs, such as the straits of Bab el-Mandeb and Malacca, and in the IOC. Case study three discusses this challenge.

Methodology

Using a qualitative case study approach, this monograph analyzes whether the Chinese energy security strategy is liberal-institutionalist or realist-mercantilist.⁵⁸ Qualitative methods, according to Landman, "seek to identify and understand the attributes, characteristics, and traits of the objects of inquiry, and the nature of the method necessarily requires a focus on a small number of countries."⁵⁹ Qualitative case studies establish general hypotheses about the actions of the actors in their particular context. The case studies in this monograph consider the nature of China's energy security strategy--liberal or mercantilist--as the dependent variable. The independent variables, cost of supply, reliability of supply, and security of supply, explore the relationships and provide a framework for analyzing China's energy security strategy.

⁵⁸Todd Landman, *Issues and Methods in Comparative Politics: An Introduction*, 3rd ed. (New York: Rutledge, 2008), 68-82.

⁵⁹*Ibid.*, 20.

The case studies are a representation of an end-to-end supply chain, beginning at the point of origin in Sudan and follow the transit corridor through to the Straits of Malacca. The Chinese NOCs are involved in every aspect of China's energy security strategy, thus understanding the evolution of the relationship is central to understanding the overarching strategy for energy security. The first case study explores the behavior of the Chinese NOCs to assess whether they are acting independently or in support of the state directed strategy. Point of origin and transit security case studies assess China's strategy in areas with strong unilateral preference, as in Sudan, and an area with overwhelming multilateral preference, as is the case along the sea lines of communication in the Indian Ocean Commons (IOC). According to the Energy Information Administration, Chinese oil imports were 50 percent, 30 percent, 3 percent and 17 percent from the Middle East, Africa, the Asia-Pacific region and other countries respectively, in 2008.⁶⁰ As Figure 2 shows, the Middle East is largest provider of oil to China and Angola is the largest provider in Africa. Sudan is the subject of case study two because it represents an immature market with direct access to ports along the main transit corridor. The mature markets represented in the figure are stable markets and China is a relatively small player. Both the African and Middle Eastern markets converge at Bab el-Mandab and merge into a single transit corridor through to the Straits of Malacca. According to the Energy Information Administration,

The overwhelming majority of China's oil imports, 93 percent came via the ocean. However, among the 93 percent that was shipped by sea, Chinese crude oil tankers only shipped 10 percent of the total, with 90 percent carried by foreign fleets. This means that foreign tankers shipped 83.7 percent of China's total oil imports in 2002, only leaving 9.3 percent of the total oil shipments by sea under Chinese control.⁶¹

This makes the SLOCs from Bab el-Mandab, through the Indian Ocean Commons (IOC) to the Straits of Malacca pivotal to the success of the Chinese strategy for energy security.

⁶⁰Energy Information Administration, China.

⁶¹Energy Information Administration, World Oil Chokepoints.

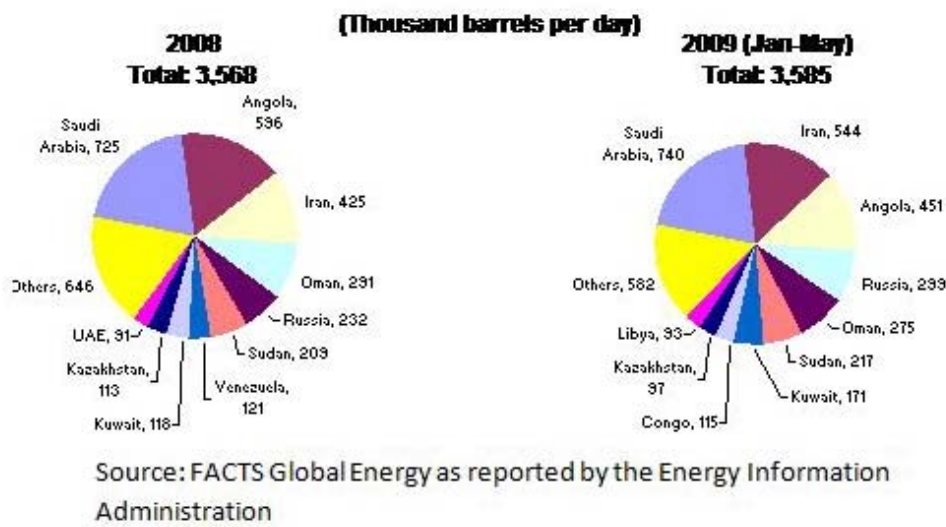


Figure 2. China's Crude Oil Imports by Source

Follow on qualitative research in these areas would expand the number of actors within each case study in an effort to identify a more general model of behavior. The follow on studies could focus on China's energy security strategies over a broader sampling of energy producing nations in Africa using statistical analysis of costs in comparison with quantities of oil imports. The next section, case study one, discusses the relationship between the Chinese central government and China's three national oil companies, CNPC, CNOOC, and Sinopec.

Case Study 1: China's National Oil Companies

Multiple, overlapping, and in some cases competing companies make up China's energy apparatus. The NOCs are China's primary agents for ensuring access to external markets. By the end of 2005, the NOCs were participating in "139 energy projects across the globe."⁶² Three

⁶²Shaofeng Chen, "Assessing the Impact of China's Foreign Energy Quest on its Energy Security," (East Asian Institute Working Paper no. 145, National University of Singapore, Singapore, March 3, 2009): 1.

NOCs dominate China's E&P capacity. The China National Petroleum Corporation (CNPC) is the largest, providing roughly 60 percent of total oil output, and primarily focuses on E&P abroad. The China Petroleum and Chemical Corporation (Sinopec) is primarily responsible for refinery and distribution operations. CNPC and Sinopec "operate a range of local subsidiaries, and together dominate China's upstream and downstream oil markets."⁶³ The China National Offshore Oil Corporation (CNOOC) is the smallest of the three, primarily focusing on offshore E&P.⁶⁴

In comparison, to the multinational oil companies (MOC), the NOCs are relatively small.⁶⁵ From perspective of scale, "the capital assets of the three leading Chinese oil companies do not add up to one third of those of Exxon-Mobile."⁶⁶ Some estimates put MOC control of proven, productive reserves at "more than 80 percent" and "less than 4 percent" for the Chinese NOCs.⁶⁷ The gap between the MOCs and the NOCs inextricably links the NOCs' strategies to the state-directed policies.

The central question for this case study is whether the NOCs are fully supporting the national strategy and thus increasing energy security or if they are acting independently, putting energy security at risk. Throughout the late 1980s and early 1990s, the NOCs vigorously executed state policy. However, as the firms grow in scale and experience their policies are increasingly at odds with state directives and favor the international oil market framework. This tension plays out in the NOCs desire to increase equity oil stakes in an effort to become more

⁶³Energy Information Administration, China.

⁶⁴Ibid.

⁶⁵Chen, "Motivations behind China's Foreign Oil Quest," 86.

⁶⁶Joseph Y. S. Cheng, "A Chinese View of China's Energy Security," *Journal of Contemporary China* 17, no. 55, (May 2008): 314.

⁶⁷Ibid., 315.

profitable and competitive in the current market. This increasingly competes with the central government's desire for oil designated for domestic use.

Equity oil is “a practice by petroleum firms to participate in foreign oil or gas projects in the form of share of stocks or investments; in return, they can annually obtain a certain portion of oil and gas produced from those projects.”⁶⁸ Oil for domestic use comprises oil reserves exploited and in production, established sources of supply on the open market, and contingency reserves like the strategic petroleum reserves (SPR). According to the EIA, equity oil stakes grew to approximately 29 percent of total production by 2008.⁶⁹ Some experts predict that this trend will increase over time.⁷⁰ This case study explores the relationship between the central government and the NOC by briefly discussing the NOCs in relation to the dominate MOCs, the energy policy and strategy apparatus, and the lack of depth at the national level.

Liberal-Institutionalism and the Chinese National Oil Companies

Much of the liberal-institutionalist policy of the Chinese NOCs is a result of increases in scale and experience. The NOCs “are latecomers to the world oil exploration and production scene, and are competing with the major oil companies from the United States and Europe that over decades have developed the long-term relationships, exploration and production expertise, and strong investment positions in all the most accessible and promising countries offering petroleum investment opportunities.”⁷¹ The NOCs are greatly expanding their stakes in the current market infrastructure.

⁶⁸Chen, “Motivations behind China’s Foreign Oil Quest,” 83.

⁶⁹Energy Information Administration, “Country Analysis Briefs: China.”

⁷⁰Kong, 3.

⁷¹Lieberthal and Herberg, 22.

Cost

As China expands its oil industry and seeks to become a member of major organizations like the International Energy Agency (IEA), the debate over the size of the SPR will become increasingly important. A key requirement for membership in the IEA is a minimum SPR of 90 days.⁷² The requirement for a SPR to further state policy puts the NOCs at odds with the central government. The preference for equity oil tied to profitability versus delaying immediate profit by building an SPR shows a clear liberal-institutionalist approach on the part of the NOCs.

Reliability

From an economy of experience perspective, “because of most oil rich countries’ exclusive policy towards foreign investments and the MOCs dominance in the international market, the oil or gas fields that Chinese NOCs could acquire abroad are generally of small acreage which have been mined for years or call for high investment for exploitation.”⁷³ Though the NOCs tend to favor direct competition, they are reliant on state support and work within the current system out of necessity. As the trend in equity oil versus oil for domestic use shows, the NOCs clearly see expansion of equity oil on the open market as the overarching strategy to ensure reliability.

Security

With increasing privatization and integration into the international markets, the NOC’s reliance on the institutional architecture for security is increasing. Greater integration means the strategy option of choice is shifting from “oil diplomacy” to “oil trade.” The maturing of the NOCs is resulting in less central government control and coordination of operations, increasing

⁷²Downs, “China,” 47; Liu, 15.

⁷³Chen, “Motivations behind China’s Foreign Oil Quest,” 86.

risk. The NOCs increasingly compete for overlapping resources and profits, which is altering their relationships with the central government. As with reliability, deficiencies in economy of experience make the NOCs reliant on the current market system.

Realist-Mercantilism and the Chinese National Oil Companies

Even with the limitations due to scale and experience of the NOCs, with state assistance, they increasingly face “other countries’ fierce competition” head on.⁷⁴ Until the NOCs reach a scale that allows for action independent of state assistance, the approach will remain realist-mercantilist. Beijing’s perception, according to Shaofeng Chen of the East Asia Institute, is that international markets “can be manipulated by the West,” thus, state support the NOC’s efforts externally is vital to success.⁷⁵

Cost

One method for mitigating the lack of experience is the acquisition of more experienced foreign oil companies in order to gain access to their inherent experience. The NOCs and the central government have closely coordinated these activities, which includes “cooperation with energy producers and consumers.”⁷⁶ In several instances, however, this cooperation has been inadequate in overcoming the economy of scale problem. In 2003, several MOCs “used their shareholders preferential purchasing rights to block the joint offer of China National Offshore Oil Corporation and Sinopec Corporations” attempt to acquire oilfields in the Caspian Sea.⁷⁷ In 2005, CNOOC failed to acquire a controlling stake in Unocal in the United States.⁷⁸ Regardless

⁷⁴Ibid., 87.

⁷⁵Ibid., 85.

⁷⁶Liu, 9.

⁷⁷Cheng, 315.

⁷⁸Ibid., 315.

of the strategy pursued, until the NOCs overcome the economy of scale and experience gaps, the gaps will remain a source of energy insecurity.

Reliability

The structure of the central government-NOC relationship is one of interdependence. The NOCs “to a large extent are both players and regulators,” with the executives “at the ministerial level in terms of their official status.”⁷⁹ In many cases, the executives come to the companies either from central government positions or vice versa. The result is that decisions on energy security matters “come in the form of a compromise, satisfying no one in the bargaining process,” and at the national level, “the absence of a central energy policy making body essentially means that the central government forsakes its authority over energy policy and leaves it up for grabs” among the various competing agents.⁸⁰ The lack of a coordinated, centralized energy policy apparatus leaves the NOCs in a position to use their power to ensure they maintain their monopoly over the national energy strategy. Both control over the physical infrastructure of the energy services and the fact that the NOCs are “de facto market regulators, particularly when it comes to joint ventures with other entities, wholesale and retail,” places incredible strain on the relationship with the central government over the energy security strategy.

Security

The tension between the desires of the NOCs and the goals of the central government are particularly apparent in the debate over the role of a national strategic petroleum reserve in providing “shock absorption” in the case of import disruption. The Chinese energy policy-making apparatus is a complex, overlapping system that breeds inefficiency. The National

⁷⁹Kong, 21.

⁸⁰Ibid., 22.

Development and Reform Commission (NDRC) is the “designated body in charge of overall energy policy in China.”⁸¹ However, the NDRC has little power to control projects and policies dealing with energy. Instead, it coordinates with a myriad of other ministries and commissions depending on the sector and whether or not financing is a requirement. The NOCs are an entity within this apparatus.

Building and maintaining an adequate strategic petroleum reserve (SPR) is a hedge against “energy supply disruptions,” a means to ensure “sustainable energy supply,” and a way to “stabilize the oil market.”⁸² What defines an “adequate” SPR is debatable. “In developed countries...such as the United States, Japan, Germany, and France, their reserves will be able to last 158 days, 161 days, 117 days, and 96 days, respectively.”⁸³ Various experts from the government, oil industries and academia question whether China can even afford an SPR.⁸⁴ Supporters of an SPR have won the argument but the debate over the final size of the SPR is ongoing. Prevailing opinion is that the SPR should range between 90 days to 120 days.⁸⁵ China’s SPR is being built in three phases.⁸⁶ Phase 1, which is complete, gives China an SPR of approximately 25 days of net oil imports. Phase 2, scheduled for completion in 2011, will more than double the SPR. Phase 3 will more than double the reserves from Phase 2, though no timeline has been set for its completion.

⁸¹Ibid., 21.

⁸²Liu, 7.

⁸³Ibid.

⁸⁴Erica Downs, “China” (monograph, The Brookings Institute, Washington, D.C., 2006), 45.

⁸⁵Liu, 7; Downs, “China,” 47.

⁸⁶Energy Information Administration, China.

National Oil Companies Conclusion

Some experts, such as Chen, note that the goals of the central government and the NOCs are frequently at odds.⁸⁷ The central government expects the NOCs to conduct activities abroad in a coordinated manner, supporting national energy security strategies. This expectation includes building and maintaining a SPR. However, “[t]he NOCs sometimes go against state directives and compete with each other in foreign bids,” putting overall energy security at risk. In doing so the NOCs “may do harm to China’s foreign interests and soft power.” Aggressive policies in places like Sudan are fueling “anti-China sentiments,” which places increasing requirements on the central government to run “interference.” The NOCs exhibit a preference for liberal-institutionalist policy, which currently they can only achieve with direct state support. The contradictory forces within the energy decision apparatus and shortfalls in scale and experience, limit their strategy to a combination of free riding and realist-mercantilist to achieve their goals. As Table 2 shows, over time, as the scale and experience of the NOCs grow, they will trend considerably more towards a liberal-institutionalist approach.

Table 2. Case Study One Conclusions

Case Study/Variable	Cost of Supply	Reliability of Supply	Security of Supply	Case Study Summary	Projected Trend
National Oil Companies	Realist-Mercantilist	Liberal-Institutionalist	Realist-Mercantilist / Free Riding	Realist-Mercantilist	Liberal-Institutionalist

⁸⁷Chen, “Motivations behind China’s Foreign Oil Quest,” 91.

Case Study 2: Point of Origin - Sudan

Diversification at the point of origin is difficult for emerging markets in the current global energy system. This difficulty makes working with “troubled” countries like Sudan, where the MOCs are underrepresented, attractive for the emerging markets. The question for China is whether the benefits associated with acquiring the resources are worth the costs and risks. While the Chinese strategy in Sudan exhibits many liberal-institutionalist aspects, the overall strategy is clearly realist-mercantilist. To explore the current and potential future state of China in Sudan, this case study will provide an overview of Sudan’s relevance to China’s energy security, discuss the liberal-institutionalist and realist-mercantilist activities in Sudan using the variables cost, reliability and security, and briefly discuss the implications of the Comprehensive Peace Agreement (CPA) for the relationship between China and Sudan.

Sudan Overview

As an oil exporter, Sudan is attractive for several reasons. First, Sudan has significant proven reserves, as well as access to deep-water port facilities along a major SLOC. Second, working with Sudan allows China to wield political and diplomatic influence due to Sudan’s current “troubled” status. Third, the 2005 CPA stipulates a vote in 2011 on whether to split Sudan into a northern and a southern government. This is problematic because the bulk of the developed oil infrastructure is in the southern regions while the major export facilities and access to the Red Sea are in the northern regions.

The period between gaining independence from the United Kingdom in 1956 and the signing of the Comprehensive Peace Agreement in 2005, was a tumultuous time in Sudanese history. The humanitarian crisis in Darfur, instability along its substantial border, an aged and stagnant infrastructure, and censure and condemnation from major world powers for human rights abuses are some of the results. China’s relations with Sudan have been tumultuous at best and some China scholars are now questioning the value of dealing with “problem” countries in light

of the total costs.⁸⁸ A positive aspect for China however is that “not only does China have a more ‘politically correct’ background as far as African politicians are concerned, but Beijing also does not reserve the moral high ground that Europe and the United States take on human rights issues.”⁸⁹

A percentage of overall oil imports come from ‘problem’ states in the Middle East and Africa. “Iran and the Sudan are clearly the most significant concern and raise a host of problems because of the challenges Iran poses to the international arena in terms of potential nuclear weapons development and the Sudan’s severe human rights problems. In a number of cases, these relationships with problem states are accompanied by broader military ties and weapons sales that increase the problems posed for U.S. policy makers.”⁹⁰ From a military arms sales perspective, experts suggest that due to the less than state-of-the-art systems currently in use in China, sales and transfers may be a way to increase cooperation.⁹¹ Regardless of the methods, “As long as the Chinese government believes that equity oil supplies are vital to energy security, China’s NOCs will have strong incentives to expand their investments in these ‘problem’ states. From a commercial standpoint, these ‘problem’ states also represent important and unique opportunities to purchase equity reserves.”⁹²

An additional test of China’s strategy with respect to the theories will come in 2011. Over the short-term, China’s reaction to the 2011 vote on whether to split Sudan into separate northern and southern governments is likely to be one of the most visible tests of its overall

⁸⁸Trevor Houser and Roy Levy, “Energy Security and China’s UN Diplomacy,” *China Security* 4, no. 3 (Summer 2008): 70.

⁸⁹“China’s 21st Century Africa Policy Evolving,” (STRATFOR Intelligence Report 2002). Available online at http://www.stratfor.com/analysis/chinas_21st_century_africa_policy_evolution (accessed November 21, 2009).

⁹⁰Lieberthal and Herberg, 22.

⁹¹Downs, “China,” 42.

⁹²Lieberthal and Herberg, 22.

strategy. In January 2005, the Sudanese government Khartoum and the Sudan People's Liberation Army (SPLA) signed the CPA, ending the civil war fought with varying degrees of ferocity since 1955.⁹³ Among the stipulations of the CPA are a 50:50 split of oil profits between the two governments and a vote in 2011 on a referendum to make the split permanent, dividing Sudan into the north, controlled by the National Congress Party (NCP) and the south, controlled by the interim Government of Southern Sudan (GoSS). In 2007, the leader of the GoSS who is also the current vice president of the Government of National Unity (GNU), visited China and "warned that unless the Chinese government and Chinese companies started engaging directly...any fissure in north-south relations would spell trouble for Chinese oil interests."⁹⁴ A discussion of the liberal-institutionalist and realist-mercantilist aspects of China's energy security strategy in Sudan follows.

Liberal-Institutionalism at Point of Origin

China's rhetoric over Sudan is clearly liberal-institutionalist. There is however, a mismatch between rhetoric and action. As the shift in Chinese strategy leading up to the Beijing Olympics indicates, under certain conditions outside institutions can exert an influence on China's strategy.

Cost

In recent years, China's role in the United Nations has undergone a number of substantial changes that challenge China's assertion of an unwavering belief in the sanctity of national sovereignty above all. The response to international pressure in the run up to the 2008 Olympics and its expanding role in peacekeeping are illustrative of this change. China's successful bid for

⁹³Energy Information Administration, "Country Analysis Briefs: Sudan," (Last updated September 2009). Available online at <http://www.eia.doe.gov/cabs/Sudan/Background.html> (accessed November 19, 2009).

⁹⁴Houser and Levy, 71.

the 2008 Olympic Games had unexpected consequences for the Beijing government, centered on the crisis in Darfur. Beijing faces increasing pressure from international organizations to intervene in crises like Darfur. This pressure has made the central government “realize that adhering to a formal policy of noninterference and putting it into consistent practice will be difficult.”⁹⁵ Unlike previous attempts by outside groups to “force” the Chinese to intervene, in the words of Mia Farrow, “one thing that China may hold more dear than their unfettered access to Sudanese oil” is “the Olympics.”⁹⁶ While Beijing denies that outside pressure was the key factor in its decision to send an envoy to intervene with the Sudanese government over Darfur,⁹⁷ the timing of the trip suggests it may have played a role. Regardless, one of the costs of working with “problem states” is the reevaluation of overall strategy.

Reliability

Liberal-institutionalists point to the Chinese voting record in the UN since inclusion as a permanent veto-wielding member of the UNSC in order to argue that China’s energy security strategy is not unilateral. According to Houser and Levy, China’s voting record on the UNSC has come much closer in line with the United States in the past 20 years than is recognized. They assert, “When China diverges, it is out of a belief in the sanctity of national sovereignty, rather than a hunger for natural resources.”⁹⁸ Perhaps even more important than the changes in the UN is the change in the public stance of the central government regarding peacekeeping operations. During a 2007 visit to Africa, Chinese President Hu Jintao stated, “the African Union and the

⁹⁵Bates Gill, Chin-hao Huang, and J. Stephen Morrison, “Assessing China’s Growing Influence in Africa,” *China Security* 3, no. 3, (Summer 2007), 12.

⁹⁶Houser and Levy, 63.

⁹⁷Helene Cooper, “Darfur Collides with Olympics, and China Yields,” *The New York Times*, (April 13, 2007, under Diplomatic Memo). Available online at http://www.nytimes.com/2007/04/13/washington/13diplo.html?_r=1 (accessed November 3, 2009).

⁹⁸Houser and Levy, 63.

United Nations should play constructive roles in a peacekeeping mission in Darfur, adding that wisdom and creativity should be employed in order to improve the efficiency of the peacekeeping mission to create favorable conditions for achieving peace in the region.”⁹⁹ Intangible costs have become an increasing strain on China’s sovereignty above all principle, increasingly complex UNSC machinations, and a changing attitude on the use of peacekeepers and participation on the world stage.

Security

Chinese efforts to secure the oil infrastructure in Sudan are clearly unilateral. There are aspects, however, that support multilateral efforts. For example, “as of May 2007, China has provided over 1,800 military troops, observers, and civilian police in support of United Nations global peacekeeping operations and is showing the world that it is ready to take on the responsibilities of a leading nation.”¹⁰⁰ While China is not directly supporting peacekeeping operations in Darfur, it is providing ancillary support under the auspices of the UN. In the 1970s China refused to support or vote for peacekeeping operations. In 1981, Beijing casted its first vote in favor of peacekeeping, and in 1990, it provided the first Chinese forces to participate directly in an operation under UN auspices.¹⁰¹ It is important to note that China’s multilateral contributions to peacekeeping operations in Darfur are separate from its unilateral efforts to secure oil and gas infrastructure in other parts of Sudan.

⁹⁹“Hu puts forward principle on Darfur issue.” Available online at http://www.chinadaily.com.cn/world/2007-02/05/content_801432.htm (accessed November 19, 2009).

¹⁰⁰Gill, Huang, and Morrison, 5.

¹⁰¹Houser and Levy, 66.

Realist-Mercantilism at Point of Origin

From a realist-mercantilist perspective, the Chinese strategy is unilateral with a willingness to use influence in international organizations to “shield” the Sudanese government to the greatest extent possible and heavy direct monetary and material investment. A clear example of realist-mercantilist rhetoric is the January 2006 publication of *China’s Africa Policy* by the PRC’s Foreign Ministry. The policy’s purpose is to “present to the world the objectives of China’s policy towards Africa...with a view of promoting the steady growth of China-Africa relations in the long term.”¹⁰²

Cost

China invests heavily in Sudan from an economic standpoint. According to Elizabeth C. Economy at the Council on Foreign Relations, “China is following a very traditional path...offering poor countries comprehensive and exploitive trade deals combined with aid.”¹⁰³ According to Stephanie Hanson at the Council on Foreign Relations (CFR), this is part of “a two-pronged strategy,” targeting “smaller, low-visibility countries” and the integration of E&P contracts with aid, in an effort to compete with IOCs.¹⁰⁴ Through this two-pronged strategy, China invests heavily in and has established long-term contracts with African governments like Sudan, which would make pulling out of Sudan extremely costly. The aid typically takes the form of infrastructure improvements, military support and training, cancellation of debts and cultural and educational exchanges. According to one source, the CNPC “has invested over US \$10 billion in Sudan’s oil sector to date” and “controls 60-70 percent of Sudan’s national oil

¹⁰²“China's African Policy,” Government Policy, Beijing: Ministry of Foreign Affairs of the People's Republic of China, January 12, 2006.

¹⁰³Stephanie Hanson, “China, Africa, and Oil,” Background, *Council on Foreign Relations*, (Washington, D.C., 2008).

¹⁰⁴Ibid.

production.”¹⁰⁵ In addition, it is the largest shareholder with over 40 percent stake in the Greater Nile Petroleum Operating Company (GNPOC), Sudan’s national oil company. The NOCs monopolize several of the developed blocks in the south-central Sudan and are one of Sudan’s largest exploration partners.

Total investment figures in infrastructure projects such as dams, hydroelectric plants, oil pipelines and terminals, roads and railways, clinics and other projects vary but are well in the billions of dollars. According to a 2002 report,

Sudan serves as an excellent example of China's strategy and goals in the region. In exchange for oil and a strategic ally, Beijing has worked hand-in-glove with the government in Khartoum. Sino-Sudanese economic cooperation dates back to the 1970s, and according to Chinese figures, Beijing has given up to \$780 million to Sudan in economic aid and implemented more than 30 projects, including the 300-megawatt-capacity Kajbar Dam project. In addition to undertaking numerous industrial and infrastructure projects, China has become one of Sudan's main weapons suppliers. Reports indicate that China has supplied everything from small arms to mortars, SCUD missiles, helicopters and fighter jets.¹⁰⁶

In addition to financial investment, significant political and diplomatic investment bolsters the Chinese efforts in Sudan. “In the public discourse surrounding it, it is widely assumed that Beijing protects the government in Khartoum to safeguard Chinese investments in Sudan’s oil sector and to ensure a reliable supply of oil to the PRC.”¹⁰⁷ Illustrative of this is China’s voting record on the UNSC. “For its first decade on the Security Council, Beijing refused to participate in any discussion of or lend any financial support to UN peacekeeping missions...out of a concern that it could be used against Chinese interests in the future.”¹⁰⁸ According to a 2006 Jamestown Foundation report, China has used its veto power on the UNSC

¹⁰⁵“China-Sudan Briefing Paper,” Darfur-Australia Network, (August 2008). Available online at http://www.darfuraustralia.org/files/China_briefing_paper.pdf (accessed November 21, 2009).

¹⁰⁶STRATFOR.

¹⁰⁷Houser and Levy, 63.

¹⁰⁸Ibid., 64.

four times none of which dealt with Sudan or the crisis in Darfur.¹⁰⁹ China has in fact abstained from major votes on Darfur.¹¹⁰ Houser and Levy note that China is much more aggressive in negotiations behind the scenes to influence UNSC actions rather than using its veto power.¹¹¹

A Brookings Institute report states, “in the case of Sudan, Beijing weakened the language of at least one UNSC resolution that initially included an automatic trigger for sanctions if Khartoum failed to stop the atrocities in Darfur.”¹¹² Taken in isolation, it is hard to determine where Beijing stands on when to intercede in matters considered internal and sovereign and when to remain on the outside in a protective role. Darfur offers an example of the potential change in Chinese views on what constitutes interference with a sovereign nation. The change in participation in peacekeeping operations offers a second example. “Externally, pressure put on China to intervene into the atrocities in Darfur appears to be working. A senior Chinese official, Zhai Jun, made an official visit to Sudan to push the Sudanese government into allowing a UN peace keeping force into Sudan.”¹¹³

Reliability

Sudan’s hydrocarbon infrastructure suffered considerable degradation and stagnation during its costly five-decade civil war. Since the signing of the CPA in 2005, according to *Oil and Gas Journal (OGJ)*, the Sudanese proven oil reserves rose from 563 million barrels in 2006 to more than 5 billion barrels in 2007.¹¹⁴ The majority of the increase was due to E&P in Southern Sudan, impossible during the civil war. Additionally, significant portions of “northwest

¹⁰⁹Yitzhak Shichor, “China’s Voting Behavior in the U.N. Security Council,” *China Brief* 6, no. 18, (Washington, DC, The Jamestown Foundation, May 9, 2007), 10-13.

¹¹⁰*Ibid.*, 11-12.

¹¹¹Houser and Levy, 66-67.

¹¹²Downs, “China,” 50.

¹¹³Cooper.

¹¹⁴Energy Information Agency, Sudan.

Sudan, the Blue Nile Basin, and the Red Sea area in eastern Sudan,” are still unexplored. Increases in exploration and much needed infrastructure improvements, like the July 1999 completion of “an export pipeline that runs from central Sudan to the Port of Sudan,” have resulted in significant production increases.¹¹⁵ According to the EIA, foreign companies in Sudan are primarily from Asia, led by the CNPC and India’s Oil and Natural Gas Corporation (ONGC), clearly representing a unilateral approach.

Thanks to the encouragement of China’s leadership, state-controlled companies have aggressively sought out E&P contracts. In Sudan, “13 of the 15 largest foreign companies operating are Chinese, primarily in the oil industry. China National Petroleum Corporation owns a 40 percent stake in the Greater Nile Petroleum Operating Company...Sinopec, is constructing a 1,500-kilometer pipeline to Port Sudan on the Red Sea, where China’s Petroleum Engineering Construction Group is building a tanker terminal.”¹¹⁶ With the help of Chinese firms, Sudan has transitioned from an oil importer to an oil exporter, earning more than \$2 billion per year in revenues. “Due primarily to oil-oriented investment, Sudan became the largest recipient of Chinese overseas investment in Africa by 2005.”¹¹⁷

According to the Chinese Ministry of Foreign Affairs, China “needs Africa for resources to fuel China’s development goals, for markets to sustain its growing economy and for political alliances to support its aspirations to be a global influence.”¹¹⁸ However, in Sudan, “Beijing finds its partner embedded in enormous political and moral controversies of its own making.”¹¹⁹ These controversies leave China wondering whether the cost of working with countries like Sudan is

¹¹⁵Energy Information Administration, Sudan.

¹¹⁶Bates Gill and James Reilly, “The Tenuous Hold of China Inc. in Africa,” *Washington Quarterly* 30:3, (Summer 2007), 40.

¹¹⁷*Ibid.*, 40.

¹¹⁸Gill, Huang, and Morrison, 9.

¹¹⁹*Ibid.*, 9.

worth the benefits gained. As a result, China has adopted a balance between a unilateral and multilateral approach to secure the availability of resources.

Point of Origin Conclusion

Is China pursuing a largely unilateral or multilateral strategy in Sudan? With significant economic, political and diplomatic capital already spent in Sudan, Beijing has a stake in long-term stability and security in the country. However, groups of progressives in China are now arguing that the negative costs are not worth the loss of international reputation should China continue to ignore humanitarian crisis.¹²⁰ Events leading up to and immediately following the 2011 referendum on the permanent division of Sudan will affect the Sino-Sudanese relationship over the short-term and in a measurable way. If the split does occur, Beijing must decide whether to continue backing the government in the north, or to continue the relationship while further strengthening relations with the south. Conflict or civil war aimed at stopping the referendum exacerbates the situation.

In reality, over the short term, any outcome increases the chances that the political situation will hinder access to Sudanese resources. Because Beijing has pursued a largely unilateral relationship with Sudan, it will likely remain in the best position, in comparison with the MOCs, to access Sudan's resources. China's actions to date in regards to Sudan have shown a willingness to pay the costs associated with the relationship both unilaterally and multilaterally. In fact, China may be weakening its energy security rather than strengthening it in the end. Overall, given the factors above, China's relationship with Sudan is overwhelmingly realist-mercantilist.

¹²⁰Simon Robinson, "Time Running Out," *Time* (September 10, 2006). Available online at <http://www.time.com/time/magazine/article/0,9171,1533376,00.html> (accessed November 20, 2009).

Table 3. Case Study Two Conclusions

Case Study/Variable	Cost of Supply	Reliability of Supply	Security of Supply	Case Study Summary	Projected Trend
Point of Origin - Sudan	Realist-Mercantilist	Realist-Mercantilist	Realist-Mercantilist	Realist-Mercantilist	Realist-Mercantilist

Case Study 3: In Transit Security

A secure, diverse, reliable flow of oil is the economic lifeblood of the Chinese government, the sea lines of communication that connect the oil producers in Africa and the Middle East are the main artery that provides the flow. As geographically delineated here, throughput covers two strategic chokepoints, and a high-risk transit area. The EIA defines chokepoints as “narrow channels along widely used global sea routes....The blockage of a chokepoint, even temporarily, can lead to substantial increases in total energy costs. In addition, chokepoints leave oil tankers vulnerable to theft from pirates, terrorist attacks, and political unrest in the form of wars or hostilities as well as shipping accidents which can lead to disastrous oil spills.”¹²¹ The problem for Beijing and the Chinese NOCs is that

The overwhelming majority of China’s oil imports, 93 percent came via the ocean. However, among the 93 percent that was shipped by sea, Chinese crude oil tankers only shipped 10 percent of the total, with 90 percent carried by foreign fleets. This means that foreign tankers shipped 83.7 percent of China’s total oil imports in 2002, only leaving 9.3 percent of the total oil shipments by sea under Chinese control. As a result, this limited control over oil shipment undoubtedly subjects China’s oil imports to various risks of disruption, particularly in times of contingency and mounts another threat to its oil insecurity.¹²²

This case study focuses on three geographically delineated regions, Bab el-Mandab Strait to the west, the major transit corridor in the IOC, where resources from both Africa and the Middle East converge, and the Straits of Malacca. The three areas are important because each

¹²¹Energy Information Administration, “World Oil Transit Chokepoints.” Energy Information Agency. Department of Energy. Washington, D.C.: DOE, 2008.

¹²²Kong, 15.

puts transit energy security at risk, is outside of China's direct control, and they house multiple actors who menace the shipping lanes.

Bab el-Mandab Strait

The Strait of Bab el-Mandab connects the Red Sea to the Gulf of Aden, separating Yemen in the Middle East from the Horn of Africa. More than 3 million barrels of oil per day, as well as other commodities, flow through Bab el-Mandab. Only 18 miles wide at its narrowest point, with a deep-water channel that restricts vessel passage, it is as prone to disruptions from hostile action as it is to those caused by accidents. "Closure of the Bab el-Mandab could keep tankers from the Persian Gulf from reaching the Suez Canal/Sumed pipeline complex, diverting them around the southern tip of Africa."¹²³ The attack on the USS Cole in Yemen in 2000, the attack on a French tanker in 2002, and the myriad acts of piracy around the strait, highlight the risks associated with the region. Bypassing Bab el-Mandab in the event of disruption requires an additional 6,000 miles transit around the Cape of Good Hope on the Southern tip of Africa.

Indian Ocean Commons

According to the *CIA World Factbook*, the Indian Ocean is the third largest ocean in the world and is the nexus for four critical waterways: the Straits of Malacca and Bab el-Mandab, the Suez Canal, and the Strait of Hormuz. It also is rich in resources from the hydrocarbons, minerals, and fisheries that support the Asia-Pacific region. "In 2008, about a hundred ships were attacked by pirates in the region, and over 35 vessels, with billions of dollars worth of cargo, were seized. (As of the end of 2008, more than a dozen, including oil tankers, cargo vessels, and other ships, along with over 300 crew members, were still being held). Ransom demands routinely exceed \$1 million per ship, and in the recent case of one Saudi oil tanker, pirates demanded \$25

¹²³Energy Information Administration, "World Oil Transit Chokepoints."

million.”¹²⁴ In addition to competing resource interests, piracy, terrorism, and counter-drug issues, any moderating force in the Indian Ocean commons is required to respond to non-standard crises such as “ethnic conflicts, cyclones, and floods.”¹²⁵ The Indian Ocean commons truly represents the full range of benefits and risks inherent in maritime transit. The preeminent naval force in the Indian Ocean commons is the U.S. Navy. China’s efforts to bypass or disengage its energy security needs in the Indian Ocean are shaping its relations in the region and creating new tensions as a result.¹²⁶ The tensions occur between both the international actors in the region, like the U.S. Navy, and regional actors, like India.

Malacca Strait

The Straits of Malacca connect the Indian Ocean to the South China Sea and the Pacific Ocean. More than 15 million barrels of oil per day flowed through the strait in 2006; it is a vital link for oil flowing from the Middle East and Africa to China and Indonesia, supplying some of the largest South-East Asian consumers. At its narrowest point in the Phillips Channel of the Singapore Strait, Malacca “is only 1.7 miles wide creating a natural bottleneck, as well as potential for collisions, grounding, or oil spills.”¹²⁷ The constricted nature of the channel also makes it a high-risk area for piracy, attempted theft and hijacking. In the event of blockage of the strait, the estimated 50,000 vessels that transit it per year would take an alternate route through

¹²⁴Robert Kaplan, “Center Stage for the Twenty-first Century: Power Plays in the Indian Ocean,” *Foreign Affairs*, (February 25, 2009). Available online at <http://harowo.com/2009/02/25/center-stage-for-the-twenty-first-century-power-plays-in-the-indian-ocean-by-robert-d-kaplan-foreign-affairs/> (accessed November 20, 2009).

¹²⁵Ibid.

¹²⁶Lieberthal and Herberg, 7.

¹²⁷Energy Information Administration, “World Oil Transit Chokepoints.”

either the Lombok Strait or the Sunda Strait. However, the same threats and risks are inherent at both locations.¹²⁸

Liberal-Institutionalism and In Transit Security

From a liberal-institutionalist perspective, the Chinese transit security strategy is more strongly dependent on rhetoric than on action. The strategy predominantly favors free riding out of necessity.

Cost

Chinese President Hu Jintao called the risk and vulnerability of transit through the Malacca Strait, the “Malacca Dilemma.”¹²⁹ With an estimated 80 percent of its oil imports passing through Malacca and the perception that the SLOCs are controlled by the U.S. Navy, the central leadership is looking for ways to mitigate any threat in the event of conflict. Lieberthal and Herberg assert that this “increasing dependency on oil flows through the Malacca Straits...is potentially accelerating China’s development of the naval capabilities necessary to protect those lanes.”¹³⁰ Expansion of the People’s Liberation Army Navy (PLAN) is one developing strategy, the search for alternative sources of supply and ways to route oil around the strait are two others. Analysis varies on how soon the PLAN would have a “blue water” capability to protect the vital sea routes but most analysts agree that it is beyond the current capability.¹³¹ Until China develops a true “blue water” navy with expeditionary capability, the strategy will continue to be “free riding” on the multilateral system.

¹²⁸Ibid.

¹²⁹“China builds up strategic sea lanes,” *Washington Times*, January 17, 2005. Available online at <http://www.washingtontimes.com/news/2005/jan/17/20050117-115550-1929r> (accessed November 13, 2009), 3.

¹³⁰Lieberthal and Herberg, 23.

¹³¹Christopher J. Pehrson, “String of Pearls: Meeting the Challenge of China’s Rising Power Across the Asian Littoral,” (Monograph, Strategic Studies Institute, U.S. Army War College, July 2006), 7.

Reliability

Over the short term, the Chinese strategy to assure energy security along the maritime transit corridor will remain reliant on international support. “Despite Beijing’s discomfort with its reliance on the United States Navy for safe passage of oil imports through the sea lines of communication, many analysts recognize that it is a long-term reality for China.”¹³² The reliance on external actors to insure reliable delivery of oil imports may diminish over the long-term as the PLAN increases capability and as relations with the nations bordering the SLOC solidifies.

Security

As with cost and reliability, China’s strategy for security along the SLOCs will continue to be a case of necessary free riding. Some argue that the importance of Africa and the perception of dominance by outside powers over the maritime corridors demonstrate a “growing willingness to secure its economic interests in Africa.”¹³³ To date however, direct action has been limited and to the greatest extent possible, coordinated with the international community. This is evidenced by the fact that prior to the 2008 deployment of warships into the Gulf of Aden to support the United Nations anti-piracy efforts, the “mission was only undertaken after receiving a positive signal from US Pacific Command chief Admiral Timothy Keating.”¹³⁴

Realist-Mercantilism and In Transit Security

China fully recognizes that a unilateral approach to energy transit security is outside of its internal capability and capacity over the short term. The expansion of the PLAN and development of strategic partnerships along the SLOCs, clearly favor the realist-mercantilist

¹³²Downs, “China,” 14.

¹³³ Jonathan Holslag, “China’s New Security Strategy for Africa,” *Parameters* 39, no. 2 (Carlisle, PA, U.S. Army War College, Summer 2009), 23.

¹³⁴ *Ibid.*, 30.

approach within their current capability. Chinese expeditionary anti-piracy efforts are realist-mercantilist but because of “free riding,” they may appear multilateral.

Cost

China is clearly willing to endure significant expenditures to increase the strength and strategic reach of the PLAN. The modern PLAN is undergoing dramatic and rapid modernization and expansion. As Robert Kaplan notes, “By sometime in the next decade, China’s navy will have more warships than the United States. China is producing and acquiring submarines five times as fast as is the United States. In addition to submarines, the Chinese have wisely focused on buying naval mines, ballistic missiles that can hit moving targets at sea, and technology that blocks signals from GPS satellites, on which the U.S. Navy depends.”¹³⁵ “When the explorer Zheng He embarked with his ‘treasure fleet’ for the glory of China 600 years ago, he encountered nothing but wind and waves as he voyaged across empty oceans.”¹³⁶ As the modernization and subsequent reach of the PLAN expands into today’s oceans, the landscape is far different from that experienced by Zheng He. Any contemporary expeditionary navy will no longer traverse countless days and weeks without encountering another vessel but will be in contact with myriad nations from embarkation. Nowhere is this fact truer than in the Indian Ocean Commons.

Reliability

Currently one of the biggest threats to reliability along the transit corridors is piracy. In 2008 alone, “pirates targeted six Chinese ships in the Gulf of Aden.”¹³⁷ It is easy to construe the Chinese action of sending vessels into the IOC to protect trade flows as a realist approach, and one that will put the PLAN in increasing contact with other nations. Increasing contact carries

¹³⁵Kaplan.

¹³⁶Pehrson, 1.

¹³⁷Holslag, 25.

the additional risk of a seemingly innocuous event triggering a regional conflict. For example, due to overfishing in the South China Sea, the Chinese fisheries industry is rapidly expanding to meet demand, to include locations within the Indian Ocean. “There is the unfortunate potential that a fishing dispute involving loss of life--which happen in East Asian waters with disturbing regularity--could serve as a tinder for nationalists on one side or the other, provoking actual hostilities between disputing, and well armed claimants in the region.”¹³⁸ In the words of Kaplan, “Already the world’s preeminent energy and trade interstate seaway, the Indian Ocean will matter even more in the future. Global energy needs are expected to rise by 45 percent between 2006 and 2030, and almost half of the growth in demand will come from India and China.”¹³⁹

Security

Currently the Chinese are reliant on outside actors for security along the SLOCs. While increases in the size and activity of the PLAN along the SLOCs represent a unilateral approach, the Chinese lack the ability to self-secure assets, leaving them reliant on a free riding approach to security. “The document Marine Corps Vision and Strategy 2025 concluded that the Indian Ocean and its adjacent waters will be a central theater of global conflict and competition this century.”¹⁴⁰ Compounding this conclusion are the tensions between the major powers in the region. “Indeed, as India extends its influence east and west, on land and at sea, it is bumping into China.”¹⁴¹ This friction between the two nations in the commons has led China to look for ways to bypass or further protect energy supplies.

¹³⁸Lyle J. Goldstein, “Strategic Implications of Chinese Fisheries Development,” *China Brief* 9, no. 16, (Washington, D.C., The Jamestown Foundation, August 5, 2009), 10-13.

¹³⁹Kaplan.

¹⁴⁰*Ibid.*

¹⁴¹*Ibid.*

According to Kaplan, “One reason that Beijing wants desperately to integrate Taiwan into its dominion is so that it can redirect its naval energies away from the Taiwan Strait and toward the Indian Ocean.”¹⁴²

But a drama with more far-reaching geopolitical consequences may be brewing in the Indian Ocean, involving two of the nations that have sent warships to fight the Somali buccaneers: longtime rivals India and China. New Delhi has had at least one ship in the Gulf of Aden since October, and late last year, with great fanfare, China deployed two warships to the same area. The ships have been active in interdicting pirates and aiding commercial ships in apparent distress--though they are not part of the U.S.-led Combined Task Force 151 (usually composed of 14 to 15 vessels from several nations), which coordinates its activity with the dominant naval force in the Indian Ocean, the U.S. Fifth Fleet, based in Bahrain. But the presence of the Chinese and Indian warships underlines Beijing's and New Delhi's intense economic and strategic interests in the world's third largest ocean.¹⁴³

Estimates vary as to how long it will take China to build a fleet capability and capacity to self-secure along the SLOCs. Until then, the Chinese strategy is short-term free riding with a long-term desire for unilateral capability.

“Harmonious World” versus the “String of Pearls”

An additional framework for analysis of China's strategy is a comparison of its “Harmonious World” policy and the “String of Pearls” strategy.¹⁴⁴ From the Chinese perspective, the expansion into the IOC is a peaceful strategy for increasing energy security, as part of China's “Harmonious World” policy.¹⁴⁵ As Blanchard notes, the doctrine is “imprecisely defined” but elements include “vigorous backing for multilateralism” and support for “diverse political, economic, and social systems.”¹⁴⁶ However, other South Asia nations see the policy as

¹⁴²Ibid.

¹⁴³Howard Chua-Eoan, “Beyond Pirates: On the High Seas, an India-China Rivalry.” Available online at <http://www.time.com/time/world/article/0,8599,1890251,00.html#ixzz0WmplzeR2> (accessed November 17, 2009).

¹⁴⁴Blanchard, 165.

¹⁴⁵Ibid., 165.

¹⁴⁶Ibid., 165.

expansionist and a form of encroachment. A 2005 Booz Allen Hamilton report entitled “Energy Futures in Asia,” commissioned by the Department of Defense, coined the term “string of pearls” to describe China’s attempts to protect its energy flow in the Asia-Pacific region.¹⁴⁷

The strategy involves combinations of port and airfield improvement projects, increasing diplomatic ties, and increasing military forces along the vital sea-lanes. “China has greatly increased cooperation, port access agreements, and maritime ties with Pakistan, Bangladesh, and Myanmar in an apparent effort to be better positioned to protect its maritime energy transport routes during a future crisis.”¹⁴⁸ Each relationship forms another “pearl” in the string. It is important to note however that the expansion into the IOC and beyond, regardless of whether it is a harmonious or overly aggressive policy, is long term.

In Transit Security Conclusion

As Table 4 shows, as with the acquisition of resources discussed above, the Chinese rhetoric dealing with in transit security is liberal but its actions clearly trend towards a realist stance. As two of the largest and most influential players in the region, China and India are increasingly competing for sources of supply in Africa and around the world. According to Erica Downs at The Brookings Institute, “oil demand exceeds supply in the Asia Pacific region...consequently; countries throughout the region are seeking supplies elsewhere.”¹⁴⁹ From Bab el-Mandab through the Strait of Malacca and into the South China Sea, the Chinese are “free riding” on the strength of the regional apparatus. They have to date, not invested in the means to take a direct realist-mercantilist approach. Over the long term, as the capability of the PLAN

¹⁴⁷“China builds up strategic sea lanes,” *Washington Times*.

¹⁴⁸Lieberthal and Herberg, 23-24.

¹⁴⁹Downs, “China,” 9-11.

increases, or as China establishes the means to bypass strategically risky areas, the approach will trend towards realist-mercantilism but it will continue to free ride.

Table 4. Case Study Three Conclusions

Case Study/Variable	Cost of Supply	Reliability of Supply	Security of Supply	Case Study Summary	Projected Trend
In Transit Security	Free Riding	Liberal-Institutionalist/ Free Riding	Liberal-Institutionalist/ Free Riding	Liberal-Institutionalist/ Free Riding	Realist-Mercantilist/Free Riding

Conclusion and Implications for Policy

Conclusion

This monograph explores key aspects of China's quest for energy resources, how they are acquiring those resources and the measures taken to secure the resources. The key driver of China's dynamic growth is the ability to access hydrocarbon resources in sufficient quantities to meet expanding demand. However, the current oil market does not favor the emergence of latecomers like the Chinese national oil companies. Their relatively small size compared to the established multinational oil companies makes central government support critical to success. The multinational oil companies currently control the vast majority of the productive proven oil reserves, leaving China the choice of working within the system or looking outside for the means to diversify. The limitations of scale and experience carry over into the security of petroleum while in transit. The choice is one of either again, working within the current system, or establishing the capability and capacity to self-secure.

Individual aspects of China's energy security strategy taken in isolation can exhibit characteristics of both a liberal-institutionalist or realist-mercantilist approach. Free riding, in many cases, makes differentiating between the two difficult at times. However, as Table 2

shows, *in toto* the strategy is in reality a complex blend of unilateral and multilateral action. The Chinese national oil companies overall prefer a liberal-institutionalist approach that allows them to compete on the global markets. As a hedge against state control overriding profitability, they are increasingly acting unilaterally to achieve their goals. From the perspective of security along the maritime transit corridors, the companies predominantly free ride or within their capabilities, work with the current system.

At point of origin in Sudan, the energy security strategy is most clearly realist-mercantilist for a number of reasons. The limitations of the multinational oil companies access to Sudan gives the national oil companies a market mostly free of competition. The combination of unilateral agreements with the Sudanese government for exploration, production, and security of infrastructure, and diplomatic influence in international organizations like the United Nations, incentivizes the Sino-Sudanese relationship. The strongest test of the relationship short-term is likely to be the Comprehensive Peace Agreement vote on the permanent split of the country of Sudan.

In transit security is the greatest case of liberal-institutionalism, coupled with free riding, in the energy security strategy. The easy answer is that the structure of China's strategy along the maritime transit corridors is because they lack the capability to self-secure. The easy answer is shortsighted for several reasons. First, the costs of building a "blue water" capability over the short-term far outweigh the benefits gained. The coalition of nation's current maintaining security in the Gulf of Aden, Indian Ocean Commons, and in the Straits of Malacca have as much interest in the free and secure flow of goods along the maritime corridors as China. Second, establishing the support infrastructure away from "home waters" is a long-term project. If China is adopting a realist approach to security in the commons, the "string of pearls," it is a strategy requiring considerable cost and time. Third, a true "blue water" capable navy is, like the "string of pearls," a long-term venture. In the interim, China will continue free riding, or practicing a liberal-institutional approach, as the situation dictates.

Table 5. Monograph Conclusions

Case Study/Variable	Cost of Supply	Reliability of Supply	Security of Supply	Case Study Summary	Projected Trend
National Oil Companies	Realist-Mercantilist	Liberal-Institutionalist	Realist-Mercantilist / Free Riding	Realist-Mercantilist	Liberal-Institutionalist
Point of Origin - Sudan	Realist-Mercantilist	Realist-Mercantilist	Realist-Mercantilist	Realist-Mercantilist	Realist-Mercantilist
In Transit Security	Free Riding	Liberal-Institutionalist / Free Riding	Liberal-Institutionalist / Free Riding	Liberal-Institutionalist / Free Riding	Realist-Mercantilist / Free Riding
Independent Variable Summary	Realist-Mercantilist	Liberal-Institutionalist	Liberal-Institutionalist		

As the IEA acknowledges, “China is not a marginal player but a powerful new force in the international energy markets.”¹⁵⁰ That China will have a major seat at the international table is without question, but how they achieve that seat is not. China is accepting its role in the world order because of the layout of the world order. “China does not just face the United States; it faces a Western-centered system that is open, integrated, and rule-based,” that is “hard to overturn and easy to join.”¹⁵¹ For China to achieve its national policy goals in the current energy market, it must meet several key criteria. First, it must assure a source of supply through long-term contracts with producing nations that not only satisfies immediate demand but also allows China’s NOCs to become profitable in the global markets. Second, China must secure transit from the point of production to end user, ensuring reliability and security of energy supplies regardless of local infrastructure threats and threats along the SLOCs and in the strategic chokepoints. Third, China must convince its populace and its internal commercial and governmental structures to become more energy efficient and to achieve a more coherent energy

¹⁵⁰International Energy Agency, 74.

¹⁵¹Ikenberry.

use policy. Fourth, China must accomplish all of the key criteria while executing a coordinated, coherent strategic communications plan that conveys its message that its development and expansion denotes a peaceful rise and not an aggressive new stance on the international stage.

Over the short term, China will continue to balance its energy security strategy to maximize opportunities. As Blanchard notes, “national interests seem to explain much of China’s devotion to multilateralism or, where relevant, the lack thereof.”¹⁵² On the opposite side of the coin, China is establishing energy relationships across the globe, “giving every indication of fitting itself into established patterns of energy trade and investment. At the same time, it does not ignore other potential sources of long-term supply throughout the world.”¹⁵³ China’s energy security strategy uses liberal-institutionalist action designed for benefit from the current, liberal system. However, as a hedge the strategy also uses a multilateral approach as cover for the realist-mercantilist action where possible, and vice versa. Over the long term, the multilateral aspects of its energy security strategy will link China more closely into the international energy system. China’s energy security policies will continue to be a synthesis between the drive for a respected place in the system and a growing willingness to cooperate internationally.

Implications for Policy

The implications of China’s grand “hedging” strategy for U.S. policy makers are twofold. First, the overarching strategy is duplicitous and seemingly contradictory in nature. It is shortsighted to believe, as the liberal-institutionalists do, that reliance on the current system will change the nature of China’s strategy. As the Chinese government and the NOCs in particular, become more intertwined in the current system, they will work actively and aggressively to change the structure of the system to better fit their goals. Equally shortsighted is the belief that

¹⁵²Blanchard, 174.

¹⁵³International Energy Agency, 74.

China dynamic growth can be “contained,” as the realist-mercantilist’s do. As with the NOCs, as the power and influence of Beijing and the PLA grows, it will become increasingly assertive in maintaining security of commodities. Therefore, U.S. policy must take a more holistic approach in regards to China. Policy aspects that limit China’s expansion in international organizations should be a careful balance that reinforces the multilateral goals while allowing the flexibility to accommodate Chinese interests. Vital to the success of these policies is the continuing predominance of the U.S. Navy as the guarantor of global maritime security.

Second, policy should serve to counterbalance China’s rise in the Asia Pacific region and globally with the rise of other partner nations, like India. Overall, achieving security and stability in the region requires a healthy balance of competition and cooperation among the major players. Some experts even suggest the U.S. and China combine resources under the auspices of the IEA to provide the counterbalance to the influence of the OPEC nations.¹⁵⁴ The policy from a liberal standpoint should offer commensurate benefits to all developing nations equally. From a realist standpoint, ensuring security and stability at key locations is critical to a successful counterbalance. However, to achieve the requisite balance will require a much more intuitive and adaptive policy making apparatus.

¹⁵⁴Liu, 15.

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